

Serial No.: 10/504,394
Docket No.: 09792909-5972
Amendment dated June 24, 2008
Reply to the Office Action of March 24, 2008

In the Claims

This listing of claims replaces all prior versions and listings of claims:

1. (Currently Amended) A system for recycling a used plastic material as a resin material, said system comprising:

a sorter which sorts said used plastic material by purpose of recycling;

a device which crushes and melts said used plastic material that has been sorted;

a reviver which regains a desired property in said used plastic material to yield a reclaimed plastic;

a measurer which measures a physical property of a sample sorted for evaluation from a said reclaimed plastic revived to yield a measured physical property value; and

an indicator which indicates said measured physical property value on ~~to~~ said reclaimed plastic ~~revived said measured property as to provide~~ recycle history information on said reclaimed plastic.

2. (Previously Presented) The recycling system according to claim 1, wherein said sorter does not separate an impurity if a predetermined physical property required for a reclaimed plastic is present.

3. (Previously Presented) The recycling system according to claim 1, wherein said sorter does not separate resins which are compatible with each other.

4. (Currently Amended) ~~The~~ A system for recycling a used plastic material as a resin material, said system comprising: according to claim 1,

a sorter to sort said used plastic material according to a recycling purpose;

a device to crush and melt said used plastic material;

a reviver to regain a desired property in said used plastic material to yield a reclaimed

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plastic;

a measurer to measure a physical property of a sample sorted for evaluation from said reclaimed plastic;

an indicator to indicate to said reclaimed plastic said measured property as recycle history information; and

~~wherein said sorter includes a second measurer which measures~~ to measure a transparent resin portion in a plastic waste material containing a transparent resin.

5. (Previously Presented) The recycling system according to claim 4, further comprising:

a resin waste material containing said transparent resin is a housing for magnetic recording product,

wherein said transparent resin portion is a window material or a flange in said housing.

6. (Currently Amended) The recycling system according to claim 1, wherein said sorter includes a separator which separates and removes a resin containing an antistatic agent to yield a remaining part having no antistatic agent.

7. (Previously Presented) The recycling system according to claim 6, wherein said resin containing said antistatic agent is a resin in a lid portion of a magnetic recording product.

8. (Previously Presented) The recycling system according to claim 1, wherein said property regained by said reviver is at least one property selected from the group consisting of density, water absorption, coefficient of expansion, tensile strength, elongation at breakage, flexural strength, flexural modulus, Izod impact strength, notched Izod impact strength, heat deformation temperature, flame retardancy, shrinkage factor, volume resistance, permittivity, weld elongation at breakage and tensile strength, melt flow rate, hue, degree of transparency, and texture.

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9. (Previously Presented) The recycling system according to claim 1, wherein said reviver is at least one selected from the group consisting of changing structure by an oxidation and reduction, addition, or elimination reaction, increasing or reducing molecular weight, controlling physical property by an additive, controlling by increasing or reducing content of a constituent or changing composition, and controlling by blending resins.

10. (Previously Presented) The recycling system according to claim 1, wherein said measurement of a physical property of said reclaimed plastic includes a measurement of impact strength and/or hue.

11. (Previously Presented) The recycling system according to claim 1, wherein said measurement of a physical property of said reclaimed plastic includes a measurement of the content of a rubber component in said reclaimed plastic.

12. (Previously Presented) The recycling system according to claim 1, wherein said used plastic material is a plastic material salvaged under predetermined conditions.

13. (Previously Presented) The recycling system according to claim 1, wherein said used plastic material is at least one resin selected from the group consisting of a styrene resin, a polycarbonate resin, and an alloy of a polycarbonate resin and an acrylonitrile-butadiene-styrene resin.

14. (Previously Presented) The recycling system according to claim 1, wherein said used plastic material is a plastic material salvaged from a used magnetic recording product.

15. (Previously Presented) The recycling system according to claim 14, wherein said used plastic material is a mixture of an acrylonitrile-butadiene-styrene resin and an acrylonitrile-styrene resin or a mixture of a high impact polystyrene resin and a polystyrene resin.

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16. (Previously Presented) The recycling system according to claim 14, wherein said used plastic material is a mixture of acrylonitrile-butadiene-styrene resin and acrylonitrile-styrene resin salvaged from a used magnetic recording product for broadcasting station.

17. (Currently Amended) ~~A~~The recycling system according to claim 14, further comprising:

an eraser to erase information recorded on said used magnetic recording product.

18. (Previously Presented) The recycling system according to claim 1, wherein said used plastic material contains an antistatic agent.

19. (Currently Amended) A plastic material containing a reclaimed plastic obtained by a system for recycling a used plastic material as a resin material, wherein said recycling system comprises:

a sorter which sorts said used plastic material by purpose of recycling;

a device which crushes and melts said used plastic material that has been sorted;

a reviver which regains a desired property in said used plastic material to yield a reclaimed plastic;

a measurer which measures a physical property of a sample sorted for evaluation from a said reclaimed plastic ~~revived to yield a measured physical property value~~; and

an indicator which indicates ~~to~~ said measured physical property value on said reclaimed plastic ~~revived said measured property as to provide~~ recycle history information on said reclaimed plastic.

20. (Currently Amended) An acrylonitrile-butadiene-styrene resin obtained by a system for recycling a used plastic material as a resin material, wherein said recycling system comprises:

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a sorter which sorts said used plastic material by purpose of recycling;

a device which crushes and melts said used plastic material that has been sorted;

a reviver which regains a desired property in said used plastic material to yield a reclaimed plastic;

a measurer which measures a physical property of a sample sorted for evaluation from a said reclaimed plastic ~~revived to yield a measured physical property value~~; and

an indicator which indicates ~~to said measured physical property value on~~ said reclaimed plastic ~~revived said measured property as to provide~~ recycle history information on said reclaimed plastic.

21. (Currently Amended) A polycarbonate resin containing a polycarbonate resin obtained by a system for recycling a used plastic material as a resin material, wherein said recycling system comprises:

a sorter which sorts said used plastic material by purpose of recycling;

a device which crushes and melts said used plastic material that has been sorted;

a reviver which regains a desired property in said used plastic material to yield a reclaimed plastic;

a measurer which measures a physical property of a sample sorted for evaluation from a said reclaimed plastic ~~revived to yield a measured physical property value~~; and

an indicator which indicates said measured physical property value on ~~to~~ said reclaimed plastic ~~revived said measured property as to provide~~ recycle history information on said reclaimed plastic.

22. (Currently Amended) A resin shaped article containing an acrylonitrile-butadiene-styrene resin comprising an acrylonitrile-butadiene-styrene resin obtained by a system for recycling a used plastic material as a resin material, wherein said recycling system comprises:

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a sorter which sorts said used plastic material by purpose of recycling;

a device which crushes and melts said used plastic material that has been sorted;

a reviver which regains a desired property in said used plastic material to yield a reclaimed plastic;

a measurer which measures a physical property of a sample sorted for evaluation from a said reclaimed plastic ~~revived to yield a measured physical property value~~; and

an indicator which indicates ~~to said measured physical property value on said reclaimed plastic~~ ~~revived said measured property as to provide~~ recycle history information on said reclaimed plastic.

23. (Currently Amended) A resin shaped article containing a polycarbonate resin comprising a polycarbonate resin obtained by a system for recycling a used plastic material as a resin material, wherein said recycling system comprises:

a sorter which sorts said used plastic material by purpose of recycling;

a device which crushes and melts said used plastic material that has been sorted;

a reviver which regains a desired property in said used plastic material to yield a reclaimed plastic;

a measurer which measures a physical property of a sample sorted for evaluation from a said reclaimed plastic ~~revived to yield a measured physical property value~~; and

an indicator which indicates ~~to said measured physical property value on said reclaimed plastic~~ ~~revived said measured property as to provide~~ recycle history information on said reclaimed plastic.

24. (Previously Presented) The resin shaped article according to claim 22 or 23, wherein said article is a magnetic recording product.

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25. (Previously Presented) A method for reprocessing a used acrylonitrile-butadiene-styrene resin, said method comprising:

separating from a used product the used acrylonitrile-butadiene-styrene resin in an independent form or in a form of a mixture with another resin to yield a separated acrylonitrile-butadiene-styrene resin,

incorporating into said separated acrylonitrile-butadiene-styrene resin an unused acrylonitrile-butadiene-styrene resin and/or another used acrylonitrile-butadiene-styrene resin to improve a physical property of said separated acrylonitrile-butadiene-styrene resin to yield a reclaimed plastic;

appending recycle history information including the physical property to said reclaimed plastic.

26. (Previously Presented) The reprocessing method according to claim 25, wherein the mixture of the used acrylonitrile-butadiene-styrene resin and the another resin includes an acrylonitrile-styrene resin from said used product.